

CLAIMS

1. A method of applying to a display substrate colour elements and addressing busbars in a defined alignment relative to each other, the method comprising:
 - forming said colour elements and said busbars on a surface of a transfer carrier;
 - adhering said colour elements and said busbars to said display substrate; and
 - removing said transfer carrier.
2. A method according to claim 1, wherein said surface of said transfer carrier is planar.
3. A method according to claim 1 or claim 2, wherein said colour elements each absorb, reflect or scatter at least one wavelength band of visible light.
4. A method according to claim 3, wherein said colour elements are light filters and comprise at least one which transmits red light, at least one which transmits green light, and at least one which transmits blue light.
5. A method according to claim 1 or claim 2, wherein said colour elements are emissive.
6. A method according to claim 5, wherein said colour elements are photoluminescent.
7. A method according to any preceding claim, wherein said colour elements at least partially absorb ultraviolet light and are spaced apart from each other by regions that are substantially transmissive of UV light.

8. A method according to claim 7, further comprising the steps of:

forming a transparent conductor layer on said busbars
5 after removal of said transfer carrier, said transparent conductor layer being capable of being rendered substantially non-conductive after exposure to UV light of sufficient intensity and duration;

illuminating said conductor layer with UV light of
10 sufficient intensity and duration through said display substrate as to cause substantial loss of conductivity in regions of said conductor layer corresponding to spaces between said colour elements;

thereby forming a plurality of transparent electrode
15 tracks, each of which is in electrical contact with a busbar.

9. A method according to claim 7, further comprising the steps of:

forming a transparent conductor layer on said busbars
20 after removal of said transfer carrier;

applying a layer of positive photoresist material to said conductor layer;

illuminating said photoresist material with UV light of sufficient intensity and duration through said display
25 substrate as to effect a chemical change in exposed regions of said photoresist material corresponding to spaces between said colour elements;

developing said photoresist so as to remove said photoresist in said exposed regions;

30 etching said conductor layer in regions where said photoresist has been removed, thereby forming a plurality of transparent electrode tracks, each of which is in electrical contact with a busbar; and

removing remaining photoresist.

10. A transfer carrier comprising a substrate having a surface on which is releasably mounted a plurality of colour
5 elements and a plurality of busbars in a defined alignment relative to each other.

11. A transfer carrier according to claim 10, wherein said surface is planar.

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12. A transfer carrier according to claim 10 or claim 11, wherein each of said plurality of colour elements is provided on a substantially transparent dielectric structure on said surface of said substrate.

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13. A transfer carrier according to any of claims 10-12, wherein said surface is electrically conductive.

14. A transfer carrier according to any of claims 10-13,
20 wherein said colour elements are light-filters.

15. A method of applying to a display substrate colour elements and addressing busbars in a defined alignment relative to each other, the method comprising the steps of:

25 (a) forming a series of translucent dielectric structures on a planar surface of a carrier, each structure comprising a colour element-receiving surface region and a raised levee, adjacent dielectric structures being spaced apart to define a trench
30 therebetween;

(b) forming said busbars by at least partially filling each of said trenches with an electrically conductive material;

(c) depositing a colour element material on each of said colour element-receiving surface regions to form a series of colour elements;

5 (d) affixing said colour elements and levees to a translucent display substrate by means of a translucent adhesive material; and

(e) removing said carrier.

10 16. A method according to claim 15, wherein said colour elements are light-filters.

17. A method according to claim 16, wherein said light-filters are at least partially UV-absorbent.

15 18. A method according to any of claims 15-17, wherein said colour element material is deposited *via* an inkjet print head.

20 19. A method according to claim 17, further comprising the steps of applying a layer of a translucent conductor material in contact with said busbars, and treating said conductor material so as to form it into translucent electrode tracks in alignment with and in contact with said busbars, by means of UV light transmitted through said display substrate and
25 said levees.

20. A method according to claim 15, further comprising providing a polariser between said levees and said display substrate.

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21. A method according to claim 20, wherein said polariser is provided by applying a coatable polariser layer on said colour elements and levees.

22. A method according to claim 20, wherein said polariser is provided adhered on said display substrate and wherein said step of affixing said colour elements and levees to said display substrate comprises affixing said colour elements and levees to said polariser.

23. A method according to claim 15, further comprising providing an optical film between said levees and said display substrate.

24. A method according to claim 23, wherein said optical film comprises a compensation retarder.

25. A method according to claim 15, further comprising providing a polariser between a colour element and a colour element-receiving surface region.

26. A method according to claim 25, wherein said polariser is provided by applying a coatable polariser layer on said translucent dielectric structures prior to depositing said colour element material.

27. A method according to claim 15, further comprising providing a transparent conducting layer on each colour element-receiving surface region prior to depositing said colour element material.

28. A method according to claim 27, wherein said transparent conducting layer is uniformly coated and forms a patterned layer upon drying determined by said raised levees.

29. A method according to any of claims 15-28, wherein said

surface of said carrier is conductive, and wherein said busbars are formed by electroplating.

30. A method of applying to a display substrate light
5 filters and addressing busbars in a defined alignment
relative to each other, the method comprising:
forming said light filters and said busbars on a surface
of a transfer carrier;
adhering said light filters and said busbars to said
10 display substrate; and
removing said transfer carrier.

31. A method of applying to a display substrate light-
filters and addressing busbars in a defined alignment
15 relative to each other, the method comprising the steps of:
(a) forming a series of translucent dielectric
structures on a planar surface of a carrier, each
structure comprising a filter-receiving surface region
and a raised levee, adjacent dielectric structures being
20 spaced apart to define a trench therebetween;
(b) forming said busbars by at least partially filling
each of said trenches with an electrically conductive
material;
(c) depositing a light-filter material on each of said
25 filter-receiving surface regions to form a series of
light-filters;
(d) affixing said light-filters and levees to a
translucent display substrate by means of a translucent
adhesive material; and
30 (e) removing said carrier.

32. A method of applying to a display substrate colour
filters and addressing busbars in a defined alignment

relative to each other, the method comprising the steps of:

- (a) forming a series of translucent dielectric structures on a planar, conductive surface of a carrier, each structure comprising a wettable surface region and a raised levee, adjacent dielectric structures being spaced apart to define a trench therebetween;
- (b) forming said busbars by at least partially filling each of said trenches with a metal by electroplating;
- (c) depositing a coloured material on each of said wettable surface regions by inkjet printing to form a series of colour filters;
- (d) affixing said colour filters and levees to a translucent display substrate by means of a translucent adhesive material; and
- (e) removing said carrier.